

ABSTRACT OF SANITARY REPORTS.

VOL. V.

WASHINGTON, D. C., AUGUST 22, 1890.

No. 34.

[Published at the Marine-Hospital Bureau in accordance with act of Congress of April 29, 1878.]

UNITED STATES.

SPECIAL REPORTS.

Gulf Quarantine Station—Infected vessels now in quarantine.

Passed Assistant Surgeon H. R. Carter reports three vessels infected with yellow fever, now held in quarantine. The British ship *Sardinian*, from Rio de Janeiro, bound for Ship Island, arrived August 10, 1890, with a crew of twenty-three men. One man died in Rio of yellow fever. Several of the crew were ashore some seven days. Two men shipped in Rio, but had not been to the city proper. All the effects of the Rio men were taken ashore at the quarantine station and boiled.

Reports of the two remaining vessels will be found in the following letters:

AUGUST 12, 1890.

SIR: I have the honor to report the arrival, about 8 p. m., this day, of the Spanish bark *Castilla*, from Cienfuegos via Pascagoula, with the mate sick with yellow fever. Said vessel was at the Pascagoula quarantine discharging ballast from August 6 until to-day. The mate developed the disease on the evening of August 9, but it was not discovered until to-day. It is undoubtedly due to fomites on the vessel, probably ballast, as she had no sickness in Cienfuegos, and was twelve days out to Pascagoula. Owing to the lateness of arrival and the condition of the patient he was not brought to hospital to-night. Another illustration of the danger in healthy vessels.

Very respectfully,

H. R. CARTER,
Passed Assistant Surgeon.

AUGUST 14, 1890.

I have the honor to report the arrival this day of the British bark *Brandon* fifty days from Rio Janeiro for Ship Island. Her captain sickened as she left Rio, and died five days out at sea, undoubtedly of yellow fever. I would lay no stress on this circumstance as affecting the vessel, but she lay in the Gamboa, and being very tight, has not pumped since she left Rio, and has a very offensive bilge, with decomposed grain and other dirt in the breast-hooks aft, where there is no ventilation. All are well on board her, but there is probability that she is infected.

Very respectfully,

H. R. CARTER,
Passed Assistant Surgeon, Marine-Hospital Service.

Reports of States, and yearly and monthly reports of cities.

ALABAMA—*Mobile*.—Month of July, 1890. Population, 40,000. Total deaths, 94, including phthisis pulmonalis, 15; enteric fever, 6; and diphtheria, 1.

CALIFORNIA.—Month of July, 1890. Reports to the State board of health from 104 cities and towns, having an aggregate population of 850,440, show a total of 1,132 deaths, including phthisis pulmonalis, 150; enteric fever, 32; diphtheria, 17; scarlet fever, 2; measles, 3; croup, 7; and whooping-cough, 3.

Oakland.—Month of July, 1890. Population, 60,000. Total deaths, 58, including phthisis pulmonalis 6 and enteric fever 2.

San Francisco.—Month of July, 1890. Population, 330,000. Total deaths, 600, including phthisis pulmonalis, 72; enteric fever, 17; diphtheria, 10; croup, 4; measles, 1; scarlet fever, 1; and whooping-cough, 1.

CONNECTICUT.—Month of July, 1890. Reports to the State board of health from 168 cities and towns, having an aggregate population of 735,430, show a total of 1,300 deaths, including phthisis pulmonalis, 109; enteric fever, 18; diphtheria and croup, 34; scarlet fever, 3; measles, 4; and whooping-cough, 18.

FLORIDA—*Tampa and surrounding country*.—Week ended August 16, 1890. Population, 10,000. Total deaths, 4, including enteric fever 1.

ILLINOIS—*Chicago*.—Month of July, 1890. Population, 1,100,000. Total deaths, 2,146, including phthisis pulmonalis, 150; diphtheria, 40; enteric fever, 86; scarlet fever, 7; measles, 6; croup, 12; and whooping-cough, 26.

MICHIGAN.—Week ended August 9, 1890. Reports to the State board of health, Lansing, from 70 observers, indicate that puerperal fever, erysipelas, inflammation of brain, cholera morbus, scarlet fever, and pneumonia increased, and that measles, typhoid fever, whooping-cough, typho-malarial fever, inflammation of kidney, and pleuritis decreased in area of prevalence.

Diphtheria was reported at 27 places, scarlet fever at 21 places, enteric fever at 22 places, and measles at 13 places.

Detroit.—Month of July, 1890. Population, 220,000. Total deaths, 447, including phthisis pulmonalis, 22; diphtheria, 29; enteric fever, 3; and scarlet fever, 4.

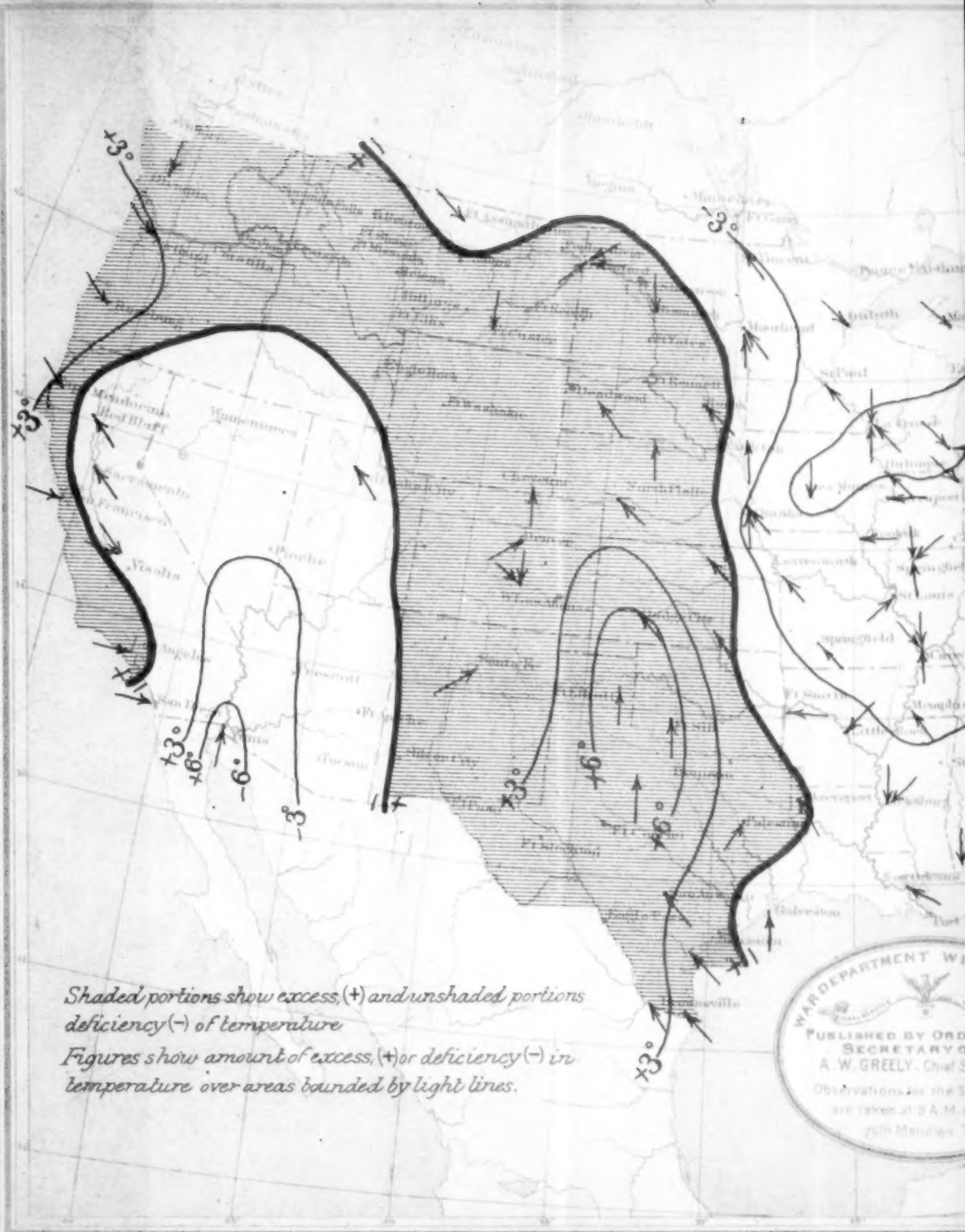
MINNESOTA.—Month of June, 1890. Reports to the State board of health show a total of 777 deaths in a population of 1,047,860, including measles, 8; scarlet fever, 9; diphtheria, 28; croup, 8; and enteric fever, 13.

Table of temperature and rain-fall, week ended August 15, 1890.

[Received from War Department, Signal Office.]

Locality.	Mean temperature in degrees, Fahrenheit.			Rain-fall in inches and hundredths.		
	Normal.	Excess.	Deficiency.	Normal.	Excess.	Deficiency.
New England States:						
Eastport, Me.....	61		6	.74		.06
Boston, Mass.....	71		17	1.02		.76
Middle Atlantic States:						
Albany, N. Y.....	72		8	.78		.55
New York, N. Y.....	73		20	1.09		.72
Washington, D. C.....	75		24	1.05	.46	
Lynchburg, Va.....	76		27	.90		.90
South Atlantic States:						
Charlotte, N. C.....	76		24	1.08		.83
Charleston, S. C.....	81		26	1.77	.05	
Savannah, Ga.....	81		31	1.82		.52
Key West, Fla.....	84		10	1.13		1.08
Gulf States:						
Atlanta, Ga.....	76		18	.92	.13	
Mobile, Ala.....	81		11	1.53		.32
Vicksburg, Miss.....	81		1	.72		.52
New Orleans, La.....	82		6	1.20		.68
Fort Smith, Ark.....	78		8	.49		.25
Galveston, Tex.....	84		1	1.11		.46
Brownsville, Tex.....	82	7		1.01		1.02
Ohio Valley and Tennessee:						
Memphis, Tenn.....	81		30	.74	.27	
Chattanooga, Tenn.....	76		19	.94		.67
Louisville, Ky.....	77		30	.80		.67
Cincinnati, Ohio.....	76		31	.90		.73
Pittsburgh, Pa.....	72		19	.74		.26
Lake Region:						
Rochester, N. Y.....	70		17	.74		.32
Cleveland, Ohio.....	70		18	.74		.74
Detroit, Mich.....	70		11	.66		.66
Milwaukee, Wis.....	68		17	.70		.69
Chicago, Ill.....	71		27	.74		.72
Duluth, Minn.....	65		24	.77		.56
Upper Mississippi Valley:						
St. Paul, Minn.....	69		24	.83		.61
Keokuk, Iowa.....	75		33	.74		.51
Springfield, Ill.....	73		24	.69		.63
St. Louis, Mo.....	77		29	.57		.35
Missouri Valley:						
Omaha, Nebr.....	74		24	.80		.53
Extreme Northwest:						
Bismarck, Dak.....	68	15		.59		.25
Rocky Mountain Slope:						
Helena, Mont.....	66	16		.21		.07
Denver, Colo.....	70	10		.35	.66	
Santa Fe, N. Mex.....	66	6		.68		.49
Pacific Coast:						
Portland, Oreg.....	66	21		.15		.15
San Francisco, Cal.....	58	18		.00	.00	.00
Yuma, Ariz.....	92		42	.11	.43	

Temperature and Prevailing Direction August 15th 1890.



Shaded portions show excess (+) and unshaded portions deficiency (-) of temperature

Figures show amount of excess (+) or deficiency (-) in temperature over areas bounded by light lines.



Direction of Wind, week ending 15th 1890.



Rainfall, week ending August

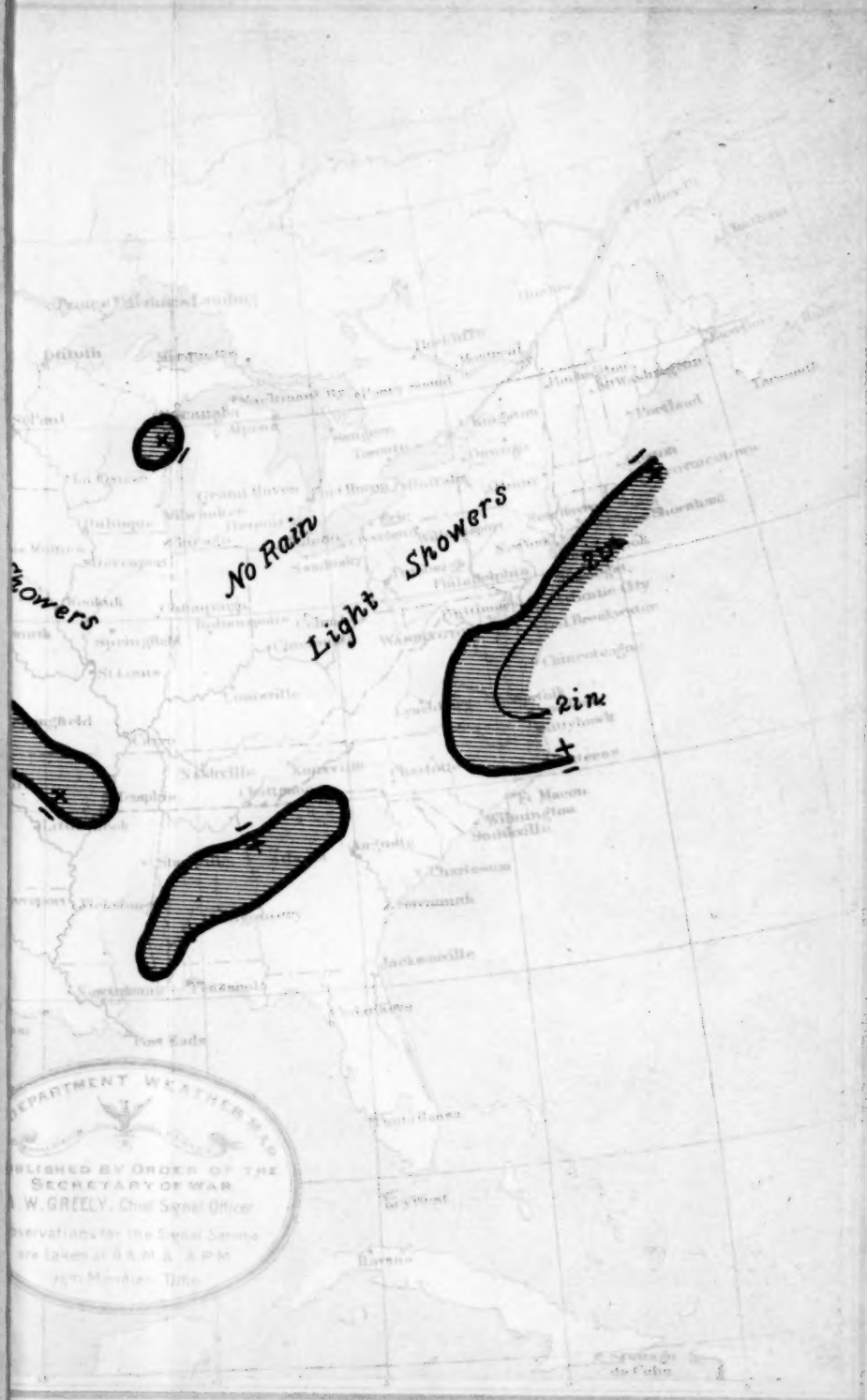
No Rain

Light Showers

Shaded portions show excess, (+) and unshaded portions, deficiency, (-) in rainfall for the week.
Figures show, in inches, amount of actual rain fall over areas bounded by light lines.



7 August 15th 1890.



FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended August 2 corresponded to an annual rate of 19.6 a thousand of the aggregate population, which is estimated at 9,715,559. The lowest rate was recorded in Cardiff, viz, 9.8, and the highest in Manchester, viz, 26.1 a thousand. Diphtheria caused 5 deaths in Salford and 6 in Manchester.

London.—One thousand six hundred and eighty-three deaths were registered during the week, including measles, 82; scarlet fever, 19; diphtheria, 36; whooping-cough, 45; enteric fever, 11; and diarrhoea and dysentery, 177. The deaths from all causes corresponded to an annual rate of 19.8 a thousand. Diseases of the respiratory organs caused 215 deaths. In greater London 2,074 deaths were registered, corresponding to an annual rate of 18.8 a thousand of the population. In the "outer ring" the deaths included measles, 31; whooping-cough, 14.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended August 2, in the 16 principal town districts of Ireland, was 18.9 a thousand of the population. The lowest rate was recorded in Armagh, viz, 10.3, and the highest in Belfast, viz, 26.3 a thousand. In Dublin and suburbs 118 deaths were registered, including measles, 5; enteric fever 2; and whooping-cough, 2.

CANADA—*Three Rivers.*—Month of July, 1890. Population, 8,414. Total deaths, 35, including 3 from phthisis pulmonalis.

FRANCE—*Marseilles.*—Month of July, 1890. Population, 375,378. Total deaths, 1,068, including small-pox, 37; enteric fever, 25; diphtheria and croup, 61; measles, 68; scarlet fever, 4; and whooping-cough, 7.

Rheims.—Month of June, 1890. Population, 97,903. Total deaths, 179, including phthisis pulmonalis, 25; diphtheria and croup, 3; measles, 10; and enteric fever, 1.

SPAIN—*Cholera.*—The United States chargé d'affaires at Madrid reports 899 cases and 493 deaths in Spain from cholera, to and including the 31st day of July, 1890.

Province and city of Valencia.

The United States consul at Barcelona sends the following continuation of his statistical report of cholera in Valencia, dated August 2, 1890:

In the city of Valencia during the week ended July 31, 1890, there were 31 cases of cholera and 13 deaths.

July 23—

	Cases.	Deaths.
Algernesí.....	1	0
Cuatretóna.....	2	0
Castellón de Rugat.....	3	2
Guadasequia.....	0	2
Yativa.....	3	0
Millares.....	4	4
Rotova.....	0	1

July 24—

Beniopa.....	0	2
Castellón de Rugat.....	1	1
Yativa.....	1	1
Millares.....	4	3
Terrateig.....	0	2
Rotglá y Corbera.....	5	4
Pueblo N° del Mar.....	1	0

July 25—

Cuatretóna.....	1	0
Castellón de Rugat.....	3	1
Millares.....	4	1
Pueblo N° del Mar.....	0	1

July 26—

Castellón de Rugat.....	0	2
Gandia.....	0	1

July 27—

Algernesí.....	1	2
Castellón de Rugat.....	1	2
Terrateig.....	1	0
Llanera.....	12	4

July 28—

Alfarrasí.....	2	0
Algernesí.....	1	3
Benifairó.....	5	3
Cuatretóna.....	1	0
Castellón de Rugat.....	2	0
Gandia.....	0	1
Llanera.....	1	1
Millares.....	2	0
Canals.....	11	5
Torrella.....	2	4
Onténiente.....	1	1
Cerdá.....	9	1
Utiel.....	1	0

July 29—

	Cases.	Deaths.
Alberique.....	1	0
Algernesí.....	4	0
Castellon de Rugat.....	1	0
Cerdá.....	0	2
Llanera.....	1	0
Montichelvo.....	1	0
Millares.....	3	0
Terrateig.....	1	0
Alcudia Crespins.....	4	2
Granja.....	2	0

July 30—

Algernesí.....	1	0
Castellon de Rugat.....	2	3
Canals.....	36	14
Granja.....	2	0
Millares.....	1	2
Terrateig.....	1	0

July 31—

Algernesí.....	5	3
Castellon de Rugat.....	3	1
Canals.....	12	5
Cerdá.....	2	1
Granja.....	4	1
Llanera.....	4	6
Manuel.....	1	0
Onténiente.....	1	1
Llosá de Ranes.....	1	1
Luchente.....	1	0
Montesa.....	2	2

ITALY—*Turin*.—Ten days ended June 30, 1890. Population, 314,827. Total deaths, 179, including enteric fever, 37; typhus fever, 11; diphtheria, 1; and small-pox, 1.

INDIA—*Ceylon*.—Quarter ended September 30, 1889. Population of the island, on the last day of the quarter, was 2,883,799. The deaths registered in this quarter amounted to 18,492, being 3,554 less than the number recorded in the preceding quarter, and 8,117 less than the number in the first quarter of the year. Of this number 6,452 were registered in July, 6,289 in August, and 5,751 in September. Phthisis pulmonalis caused 458 deaths; enteric fever, 615; diphtheria, 3; measles, 88; small-pox, 5; and whooping-cough, 14.

EGYPT—*Alexandria*.—Period from July 4 to July 10, 1890. Population, 231,396. Total deaths, 160, including phthisis pulmonalis, 9; typhus fever, 1; enteric fever, 9; and small-pox, 1.

Cairo.—Period from July 4 to July 10, 1890. Population, 374,838. Total deaths, 305, including phthisis pulmonalis 18 and enteric fever 12.

WEST INDIES—*Island of Antigua—St. John's*.—Population, 15,847. During the period from April 26 to August 2, 1890, the United States

vice-consul reports 203 deaths. No deaths from contagious diseases were reported.

CUBA—*Havana*.—Month of July, 1890. Total deaths, 863, including yellow fever, 67; so-called pernicious fever, 22; enteric fever, 22; diphtheria and croup, 7; and measles, 13.

Cholera in Turkey.

[Reported by Dr. Spiridion C. Zavitziano, Constantinople, July 25, 1890.]

Cholera exists again this year in Turkey. Three provinces have been attacked by the cholera epidemic since the month of June, viz, Mossoul and Diarbekir in the north of Mesopotamia, and Bitlis in Armenia. We can not tell where the epidemic first began, but, up to the middle of June, three cases of cholera had been noticed at Gesire and one death. Since that day we have, by telegraph, official reports which are far from being precise and exact. Thus, we read in one of them that from the 22d of June to the 11th of July there is not a single case, but there are fifty-three deaths from cholera.

When I can obtain all the official reports I will give the exact number of all cases, as well as the death rate. At this moment I can give, approximately, the total number of cases and deaths in the provinces of Diarbekir and Mossoul.

It is officially reported from Mossoul that from the 22d of June to the 17th of July 191 persons have been attacked by cholera and that 120 persons have died.

In the province of Diarbekir, from June 17 to July 17, there were 143 cases and 114 deaths.

In the province of Bitlis there have been some cases in the Sanziak, or district of Sigurd, on the road between Bitlis and Diarbekir, but since the 15th of July I have no reports of further sickness.

From Camaran, in the Red Sea, the chief inspector of the lazaretto where the Mohammedan pilgrims are quarantined writes that among the pilgrims landed by the steamer *Dencan*, coming from Bombay, there were several who had been attacked by cholera, and from the 10th of July to the 14th of the same month 10 men died from the epidemic.

In the capital of the empire the sanitary condition is rather good, with the exception of a small epidemic of diarrhoea in children, accompanied by several fatal cases.

On the bacillus of tetanus.

[Translated for this Bureau from *La Rivista Internazionale d'Igiene*, Naples, Italy, June, 1890.]

Weyl has succeeded in isolating from the pure culture of the bacillus of tetanus, tetannia, and several other ptomaines isolated for the first time by Brieger. He has obtained large quantities of phenic acid as an accidental product of the culture of the bacillus of tetanus, which recalls the discovery made by Baumann of this acid as one among the products of decomposition of albuminous substances.

The toxic principle of tetannia is weak; it increases in beef broth culture; inoculation in small doses produces in the inoculated animals the phenomena of acute tetanus. A mouse inoculated with $\frac{1}{4}$ c. c. of pure culture exhibited convulsions of the posterior extremities at the end of five minutes. In a short time the anterior extremities and tail of the animal stiffened. At the end of three hours the animal died. The development of the disease differed from that of tetanus obtained with ordinary inoculation. This difference is explained by the fact that in acute tetanus the effect is immediate, while in inoculated tetanus the micro-organisms transmitted must multiply before their deleterious effects exhibit themselves.

Weyl has attempted to sterilize the pure cultures developed in broth. Sterilization by the vapor of hot water was found to be impracticable, since tetannia, one of the most subtle of chemical substances, is destroyed in the process. By the use of the Chamberland filter, Weyl succeeded in almost totally depriving the culture of germs, and, repeating his experiment with the filtered material, he produced acute tetanus.

Since the toxic effect of these cultures far exceeded that of tetannia, Weyl asserts that the cultures must contain, beside tetannia, another toxic principle.

Mortality in Havana, Cuba, for the year 1889.

[Translated for this Bureau from *La Rivista Internazionale d'Igiene*, Naples, June, 1890.]

At the Medical Congress of Cuba, held at Havana, January 15 and 20, 1890, Dr. Della Guardia presented a report on mortality in Havana for the year 1889, showing the number of deaths to have been 5,923 in 201,448 inhabitants. There were 343 deaths from yellow fever; 149 from pernicious fever; 20 from glanders; 2 from rabies; 178 from typhoid fever; 1,183 from pulmonary tuberculosis; 40 from tetanus. Mortality was greatest during the months of June, July, and August. Comparison of statistics for 1890 with those for 1887 and 1888 shows yellow fever to have decreased, relatively, by more than 100 per cent.

Doctor Lyada read a report on yellow fever, which disease he affirms not to have existed in Cuba before the African immigration. It may be considered as having been imported from Africa in slave ships.

Doctor Gutierrez-Lée read a report on Borrás fever, a disease which many physicians are inclined to consider an attenuated form of yellow fever. He considers it contagious, typhic in character, distinct from yellow fever and from malarial fever. It attacks, by preference, children from three to fourteen years of age.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—							
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.
London	July 26	5,758,500	1746					2	17	26	112
Liverpool	July 26	613,463	247					2	15	2	
Glasgow	July 26	545,678	240					2	2	1	
Glasgow	Aug. 2	545,678	224						2	2	
Brussels	July 26	477,398	154					1			
Hamburg	July 5	455,000	235					4		5	
Hamburg	July 12	455,000	235						2	3	
Hamburg	July 19	455,000	261					3	1	5	
Lyons	July 26	401,930	153					1		5	
Amsterdam	July 26	406,402	118			1		1		3	
Milan	Aug. 2	400,000					1				
Copenhagen	July 26	312,387	117						4	7	
Munich	July 19	298,000	171						2	3	
Cologne	July 19	284,574	114								8
Cologne	July 26	284,574	142						3	2	2
Edinburgh	July 26	271,135	109					1			
Dresden	July 26	269,000	96								
Bristol	July 28	232,248	74						1	1	
Belfast	July 26	232,222	94					4			
Rotterdam	Aug. 2	203,472	73							1	
Havana	Aug. 9	200,000	178		17			2			
Genoa	Aug. 2	180,379	97			4	1			1	
Trieste	July 19	158,054	71							3	
Trieste	July 26	158,054	81								
Venice	July 19	157,572	87			6			1		
Christiania	July 30	143,500	59							1	2
Punchal	July 26	133,250	29			5					
Nuremberg	July 19	129,400	55						1	1	
Nuremberg	July 26	129,400	52					3	2	3	
Stuttgart	July 19	125,510	60							5	
Stuttgart	July 26	125,510	58						1	3	
Stuttgart	Aug. 2	125,510	59							4	
Bremen	July 19	124,000	37							1	
Bremen	Aug. 4	124,000	45							1	
Pernambuco	July 15	120,000	217			80					
Cardiff	Aug. 2	117,012	22								
Barmen	July 26	113,000	30								
Havre	July 26	112,074	75					1		4	1
Aix-La-Chapelle	July 27	109,246	41								
Aix-La-Chapelle	Aug. 3	109,246	60								
Gothenburg	July 26	102,782	24						5		
Rheims	July 19	97,903	60			1				1	1
Rheims	July 27	97,903	49							1	
Zurich	July 19	91,323	13				4			5	2
Zurich	July 26	91,323	14				6			3	1
Leith	July 26	78,538	16						1		
Mayence	July 19	65,802	28								
Mayence	July 26	65,802	27								
Jerez de la Frontera	July 26	61,708	25			1					
Cadiz	July 19	57,157	45					2		1	
Cadiz	July 26	57,157	44			1				1	
Cienfuegos	Aug. 3	40,655	18			1		2			
London, Ont.	Aug. 9	32,000	27					1			
Amherstburg	Aug. 12	30,000	4								
New Castle, N. B.	Aug. 2	28,000	5								
Cardenas	Aug. 3	25,000	12				2	2			
Vera Cruz	July 31	23,800	19								
Kingston, Can.	Aug. 8	12,294	13								
Victoria, B. C.	Aug. 2	18,000	5								
Dunfermline	July 19	15,839	9								1
Flushing	Aug. 2	12,793	6								
Guelph	Aug. 9	10,173	4							2	
Tampico	July 28	9,000	6								
Sarnia	Aug. 11	6,200	2								

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.